DEPARTMENT OF THE ARMY
US ARMY DEFENSE AMMUNITION CENTER AND SCHOOL
SAVANNA, ILLINOIS 61074-9639

REPLY TO
ATTENTION OF:

SMCAC-ESL (385[A])

13 APR 1989

MEMORANDUM FOR Chairman, Department of Defense Explosives Safety Board, ATTN: DDESB-KO, 2461 Eisenhower Avenue, Alexandria, VA 22331-0600

SUBJECT: Tube-launched, Optically Tracked, Wire-guided (TOW) Missile Rack

1. References:

a. Technical Data Package (TDP), 28 November 1988, Ammunition Quickload Program, TOW Missile Rack (enclosure 1).

b. Memorandum For Record (MFR), U.S. Army Ballistic Research Laboratory (USABRL), SLCBR-TB-EE, 17 January 1989, subject: TOW Missile Rack (enclosure 2).

c. NMT/TERA No. T-88-1762-U, 6 December 1988, TOW Missile CONEX Test Results (enclosure 3).

2. In accordance with previous discussions at Department of Defense Explosives Safety Board (DDESB), 17 January 1989, and at Picatinny Arsenal (PTA) during the Quickload in process review (IPR), 27 January 1989, the above listed enclosures provided by Project Manager-Ammunition Logistics (PM-AMMOLOG) are forwarded for your formal review. Reference 1.a. describes the basic fabrication requirements. The quantity distance (QD) requirements derived from the test results, also described in reference 1.a., can be generally stated as follows:

a. Where full fragment protection is required for inhabited building exposure, IAW DOD 6055.9-STD, July 1984, DOD Ammunition and Explosives Safety Standards, paragraph E-2, chapter 2, an arc 350-foot radius with a 740-foot wedge from ground zero, 30 degrees either side of the container express (CONEX) doors will be required (see figure 1 in enclosure 1).

b. Exposures not requiring fragment protection will be required to have a separation distance from the TOW CONEX potential explosion site (PES) based on 50 pounds, 1.1, net explosive weight (NEW) (see paragraph III, enclosure 1).

c. The structure is considered barricaded on all sides (see paragraph IV, enclosure 1).

3. Reference 1.b. is a summary of the full scale test results.

4. Request DDESB approval of the TDP.

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5. Point of contact (POC) is Mr. Dan Carroll, SMCAC-ESL, AV 585-8749.

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as

JOHN L. BYRD, JR.
Director
Technical Center for Explosives Safety

CF (wo/encls):
Commander, U.S. Army Armament, Munitions and Chemical Command, ATTN: AMCPM-AL,
Picatinny Arsenal, AL 07806-5000

DEPARTMENT OF DEFENSE EXPLOSIVES SAFETY BOARD
2461 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22331-0600

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DDESB-KT

28 APR 1989

MEMORANDUM FOR DIRECTOR, US ARMY TECHNICAL CENTER FOR EXPLOSIVES SAFETY, ATTN: SMCAC-ES, SAVANNA, IL 61074-9639

SUBJECT: Tube-Launched, Optically Tracked, Wire-Guided (TOW) Missile Rack

1. References:

a. Technical Data Package (TDP), Ammunition Quickload Program, TOW Missile Rack, prepared by US Army Ballistic Research Laboratory, Aberdeen Proving Ground, Md, 28 Nov 88.

b. US Army Technical Center for Explosives Safety, ATTN: SMCAC-ES (385(A)) letter, dated 13 Apr 89, SAB.

c. NMT/TERA No. T-88-1762-U, TOW Missile CONEX Test Results, prepared by New Mexico Institute of Mining and Technology, TERA Group, Socorro, NM, 6 Dec 88.

2. The TOW missile rack TDP (reference 1.a.) has been reviewed as requested in reference 1.b. Based on the information provided, the TDP is approved by this office provided that the specification of the orientation of the TOW missiles be included in the TDP to require that the warheads be directed towards the rear of the CONEX (container express). The fragment hazard results are based on tests conducted with the missiles in this orientation (reference 1.c.).

3. The quantity-distance requirements derived from the test results as stated in reference 1.b. are concurred in by this office.

/s/ COLONEL THOMAS F. HALL, JR.

wd all encls

THOMAS F. HALL, JR.
Colonel, USA
Chairman

ACTION OFFICER Ward
DOC T # 2103T